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(54) Title: **COMPOSITIONS AND METHODS FOR TREATING NIDDM AND OTHER CONDITIONS AND DISORDERS ASSOCIATED WITH AMPK REGULATION**

(57) **Abstract;** Compositions and methods are provided to increase glucose uptake in a cell as well as to treat a patient suffering from a condition or disorder associated with AMPK regulation. Particularly contemplated compositions include a compound that is isolated from a plant that has AICAR-like activity. In another aspect of the invention, contemplated compositions comprise a non-insulin compound that has AICAR-like activity and activates AMPK in a cell.